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Interplane penetration depth in
 κ -(ET)₂Cu[N(CN)₂]Br¹ RUSSELL GIANNETTA, University of Illinois at Urbana-Champaign, Urbana, IL 61801, Z. SHI, T.A. OLHEISER, A. MCCORMICK, D.D. LAWRIE, Loomis Laboratory of Physics, U. of Illinois at Urbana-Champaign, Urbana, IL 61801, R. PROZOROV, Ames Laboratory and Department of Physics and Astronomy, Iowa State University, Ames, Iowa 50011, J.A. SCHLUETER, A.M. KINI, U. GEISER, Material Sciences Division, Argonne National Laboratory, Argonne, IL 60439 — We report measurements of the interplane penetration depth $\lambda_{\perp}(T)$ in the organic superconductor κ -(ET)₂Cu[N(CN)₂]Br ($T_C = 11.9$ K). At low temperatures, the superfluid density $\rho_{\perp} = [\lambda_{\perp}(0)/\lambda_{\perp}(T)]^2 \propto 1-AT^N$ with $N = 1.3 - 1.5$, close to the exponent measured for the in-plane superfluid density. This result adds support to a d-wave picture, but with transport between planes more coherent than is observed in similarly anisotropic copper oxide superconductors.

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☒ Prefer Oral Session
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